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<p>Substitute for form 1449A/PTO (Modified by BSTZ 6/30/99)</p> <p><b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b></p> <p>(use as many sheets as necessary)</p>		<p>Complete if Known</p>	
		Application Number	09/467,544
		Filing Date	12/10/1999
		First Named Inventor	Berkner
		Group Art Unit	2721
		Examiner Name	Not yet assigned
Sheet	1	of	9
<p>Attorney Docket Number</p> <p>74451.P103</p>			

## U.S. PATENT DOCUMENTS

## FOREIGN PATENT DOCUMENTS

Examiner Initials *	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Translation? Yes/No
	Office or Country	Number	Date			

## OTHER DOCUMENTS

Examiner Initials *	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published (if known).	Translation? Yes/No
SP	ABRAMOVICH, F., Silverman, B.W., "Wavelet Decomposition Approaches to Statistical Inverse Problems," <i>Biometrika</i> , vol. 85, pp. 115-129, 1998.	
SP	BHAKARAN, V., et al., "Text and Image Sharpening of Scanned Images in the JPEG Domain," <i>Proceedings of the 1997 International Conference on Image Processing (ICIP '97)</i> , pp. 326-329, 1997.	

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				Application Number	09/467,544
				Filing Date	12/10/1999
				First Named Inventor	Berkner
				Group Art Unit	2721
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				Attorney Docket Number	74451.P103

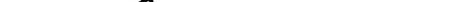
## U.S. PATENT DOCUMENTS

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## **OTHER DOCUMENTS**

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sb	POLESEL, A., et al., "Adaptive unsharp masking for contrast enhancement," in Proceedings of ICIP'97, pp. 267-270, 1997.	
sf	ZONG, X., Laine, A.F., Geiser, E.A., Wilson, D.C., "De-Noising and contrast enhancement via wavelet shrinkage and nonlinear adaptive gain," Proceedings of the SPIE, vol. 2762, pp. 566-574, Orlando, FL, 1996.	

Examiner Signature		Date Considered	3/8/2005
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		Filing Date	12/10/1999
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		Group Art Unit	2721
		Examiner Name	Not yet assigned
Sheet	4	of	9
		Attorney Docket Number	

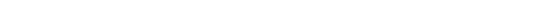
## **U.S. PATENT DOCUMENTS**

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CB	+ ANDREWS, H.C., Hunt, B.R., Digital Image Restoration. Prentice-Hall, Inc. Englewood Cliffs, New Jersey, 1977.	
SF	+ BERKNER, K., Wells Jr, R.O., "Smoothness estimates for soft-threshold denoising via translation invariant wavelet transforms," Tech. Rep. CML TR98-01, Rice University, 1998.	
SF	+ COIFMAN, R.R., Donoho, D.L., "Translation invariant denoising," in Wavelets and Statistics, .	
	Springer Lecture Notes (A. Antoniades, ed.), Springer-Verlag, 1995.	

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STATEMENT BY APPLICANT** *MAI*

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**Complete if Known**

Application Number	09/467,544
Filing Date	12/10/1999
First Named Inventor	Berkner
Group Art Unit	2721
Examiner Name	Not yet assigned
Attorney Docket Number	74451.P103

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**Attorney Docket Number**

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## **OTHER DOCUMENTS**

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<i>SF</i>	<p>DONOHO, D.L., "De-noising by soft-thresholding," IEEE Transactions on Information Theory, vol. 41, no.3, pp. 613-627, 1995.</p>	
<i>SF</i>	<p>JAIN, A.K., Fundamentals of digital image processing. Prentice Hall, Englewood Cliffs, NJ, 1989.</p>	
<i>SF</i>	<p>KINGSBURY, N., "The dual-tree complex wavelet transform: a new efficient tool for image restoration and enhancement," in Proc. European Signal Processing Conf., pp. 319-322, 1998.</p>	

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*John Rungwasa*

**Date  
Considered**

3/8/2005

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**INFORMATION DISCLOSURE  
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Application Number	09/467,544
Filing Date	12/10/1999
First Named Inventor	Berkner
Group Art Unit	2721
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Attorney Docket Number	74451.P103

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SF	LANG, M., Guo, H., Odegard, J.E., Burrus, C.S., Wells Jr, R.O., "Noise reduction using an un-	Yes/No
	decimated discrete wavelet transform," IEEE Signal Processing Letters, vol. 3, pp. 10-12, 1996.	
SF	PRATT, W., Digital Image Processing, John Wiley & Sons, NY, 1978.	
SF	ABRAMOVICH, F., Sapatinas, T., Silverman, B.W., "Wavelet Thresholding via a Bayesian	
	Approach," J. Royal Statist. Soc. Ser. B, vol 60, pp. 725-749, 1998.	

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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <small>(use as many sheets as necessary)</small>		Application Number	09/467,544
		Filing Date	12/10/1999
		First Named Inventor	Berkner
		Group Art Unit	2721
		Examiner Name	Not yet assigned
Sheet	7	of	9
Attorney Docket Number			
74451.P103			

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Examiner Initials *	U.S. Patent Document Number	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Filing Date if Appropriate

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<i>SL</i>	DEVORE, R.A., Jawerth, B., Lucier, B.J., "Image compression through wavelet transform coding,"				
	IEEE Trans. Information Theory, vol. 38, no. 2, pp. 719-746, 1992.				
<i>SL</i>	DONOHO, D.L., Johnstone, I.M., "Adaption to unknown smoothness via wavelet shrinkage,"				
	J. American Statist. Assoc., pp. 1200-1224, 1995.				

Examiner Signature	<i>John R. Runganavar</i>	Date Considered	<i>3/8/2005</i>
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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(use as many sheets as necessary)</i>		Application Number	09/467,544
		Filing Date	12/10/1999
		First Named Inventor	Berkner
		Group Art Unit	2721
		Examiner Name	Not yet assigned
Sheet	8	of	9
		Attorney Docket Number	

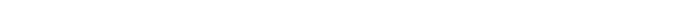
## U.S. PATENT DOCUMENTS

## FOREIGN PATENT DOCUMENTS

Examiner Initials *	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Translation? Yes/No
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## OTHER DOCUMENTS

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SP	DONOHO, D.L., Vetterli, M., DeBore, R.A., Daubechies, I., "Data compression and harmonic analysis," IEEE Transactions on Information Theory, vol. 44, no. 6, pp. 2435-2476, 1998.	
SP	LEVY VEHEL, J., Guiheneuf, B., "2-microlocal analysis and applications in signal processing" in Proceedings of International Wavelet Conference, Tanger, Morocco, 1998.	

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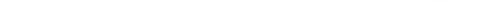
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				Application Number	09/467,544
				Filing Date	12/10/1999
				First Named Inventor	Berkner
				Group Art Unit	2721
				Examiner Name	Not yet assigned
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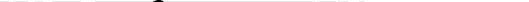
## OTHER DOCUMENTS

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<i>sf</i>	MUNOZ, A., Blu T., Unser, M., "Non-Euclidean Pyramids," in Proceedings of SPIE Conference, San Diego, vol. 4119, pp. 710-720, 2000.	

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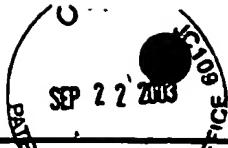
Substitute for Form 1449A/PTO (Modified)			<i>Complete if Known</i>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(use as many sheets as necessary)</i>			Application Number	09/467,544
			Filing Date	12/10/1999
			First Named Inventor:	Kathrin Berkner
			Group Art Unit	2721
			Examiner Name	Not Yet Assigned
Sheet	1 of 1	1	Attorney Docket Number	74451.P103
<b>OTHER ART – NO PATENT LITERATURE DOCUMENTS</b>				
Examiner Initials*	Cite No <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published		
JP	1	BURT, PETER J., et al., "The Laplacian Pyramid as a Compact Image Code," IEEE Transactions on Communications, Vol. Com-31, No. 4, April 1983, pgs. 532-540.		
JP	2	GALATSANOS, NIKOLAS P., et al., "Methods for Choosing the Regularization Parameter and Estimating the Noise Variance in Image Restoration and Their Relation," IEEE Transactions on Image Processing, Vol. 1, No. 3, July 1992, pgs. 322-336		
JP	3	LU, JIAN, et al., "Contrast Enhancement Via Multiscale Gradient Transformation," Proceedings of the 1994 International Conference on Image Processing (ICIP) '97, pp. 482-486.		
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Sheet	1	of	2	Application Number	09/467,544
				Filing Date	December 10, 1999
				First Named Inventor	Kathrin Berkner
				Art Unit	2721
				Examiner Name	Unknown
				Attorney Docket Number	74451P103

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**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

Sheet

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**Complete If Known**

Application Number	09/467,544
Filing Date	December 10, 1999
First Named Inventor	Kathrin Berkner
Art Unit	2721
Examiner Name	Unknown
Attorney Docket Number	74451P103

**NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No.*	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>1</sup>
SF	C	CARRATO, SERGIO, et al: "A Simple Edge-Sensitive Image Interpolation Filter", Proceedings of the International Conference on Image Processing (ICIP) Lausanne, Sept. 16-19. 1996, New York, IEEE, US, vol. 1, pgs. 711-714, XP010202493.	
SF	D	CAREY, W. KNOX, et al: "Regularity-Preserving Image Interpretation", IEEE Transactions on Image Processing, vol. 8., no. 9, September 1999, pgs. 1293-1297, XP002246254.	
SF	E	REEVES, T.H., et al: "Multiscale-Based Image Enhancement", Electrical and Computer Engineering, 1997. Engineering Innovation: Voyage of Discovery. IEEE 1997 Canadian Conference on St. Johns, NFLD., Canada May 25-28, 1997, New York, NY. (pgs. 500-503), XP010235053.	

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